

CLAIMS

1. A method of generating a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference, the method comprising

(a) acquiring data from one or more receivers, the positions of which may be known or determined, the data from a receiver comprising offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source in each receiver or to each other; and

(b) combining the acquired data and calculating the list of offsets relative to the common reference.

15 2. A method of generating a list of offsets in time, phase, frequency, or derivatives thereof, or their equivalents expressed as offsets in distance or derivatives thereof, of a plurality of transmission source signals, received at a given location, relative to a common reference, the method comprising

20 (a) acquiring data from one or more receivers, the positions of which may be known or determined, the data from a receiver being representative of the received signals;

(b) determining from the acquired data the offsets in time, phase, frequency, or derivatives thereof, respectively of signals received from the transmission sources relative to a reference source or to each other; and

25 (c) combining the offsets so determined and calculating the list of offsets relative to the common reference.

30 3. A radio positioning method for determining the position of one or more receivers the positions of which are unknown, which method includes the method of claim 1 or claim 2.

4. A radio positioning method according to claim 3, wherein the common reference comprises an external reference.

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5. A radio positioning method according to claim 4, wherein the common reference comprises a GPS signal.

5 6. A radio positioning method according to any of claims 3 to 5, wherein the step
of acquiring data from said one or more receivers includes instigating acquisition of
said data from a common location.

10 7. A radio positioning method according to any of claims 3 to 5, wherein the step
of acquiring data from said one or more receivers includes instigating acquisition of
said data from each said receiver at times determined by each said receiver.

15 8. Apparatus for generating a list of offsets in time, phase, frequency, or
derivatives thereof, or their equivalents expressed as offsets in distance or derivatives
thereof, of a plurality of transmission source signals, received at a given location,
relative to a common reference, the apparatus comprising

20 (a) means for acquiring data from one or more receivers, the positions of
which may be known or determined, the data from a receiver comprising
offsets in time, phase, frequency, or derivatives thereof, respectively of signals
received from the transmission sources relative to a reference source in each
receiver or to each other; and
(b) means for combining the acquired data and calculating the list of
offsets relative to the common reference.

25 9. Apparatus for generating a list of offsets in time, phase, frequency, or
derivatives thereof, or their equivalents expressed as offsets in distance or derivatives
thereof, of a plurality of transmission source signals, received at a given location,
relative to a common reference, the apparatus comprising

30 (a) means for acquiring data from one or more receivers, the positions of
which may be known or determined, the data from a receiver being
representative of the received signals;
(b) means for determining from the acquired data the offsets in time, phase,
frequency, or derivatives thereof, respectively of signals received from the
transmission sources relative to a reference source or to each other; and

(c) means for combining the offsets so determined and calculating the list of offsets relative to the common reference.

10. A radio positioning system including apparatus according to claim 8 or to
5 claim 9.

11. A radio positioning system according to claim 10, wherein the common reference comprises a reference external to said receivers.

10 12. A radio positioning system according to claim 11, wherein the common reference comprises a GPS signal.

15 13. A radio positioning system according to any of claims 10 to 12, wherein the means for acquiring data from said one or more receivers includes a computer system arranged to instigate the transfer of said data from said one or more receivers to said computer system at times determined by said computer system.

20 14. A radio positioning system according to any of claims 10 to 13, wherein the means for acquiring data from said one or more receivers includes a computer system, and including means for instigating said acquisition of data from each said receiver at times determined by each said receiver.

15. A digital telephone network, including a radio positioning system according to any of claims 10 to 14.